

## Find the Logger You've Been Looking For

Fully isolated channels and noise resistance provides unmovable reliability

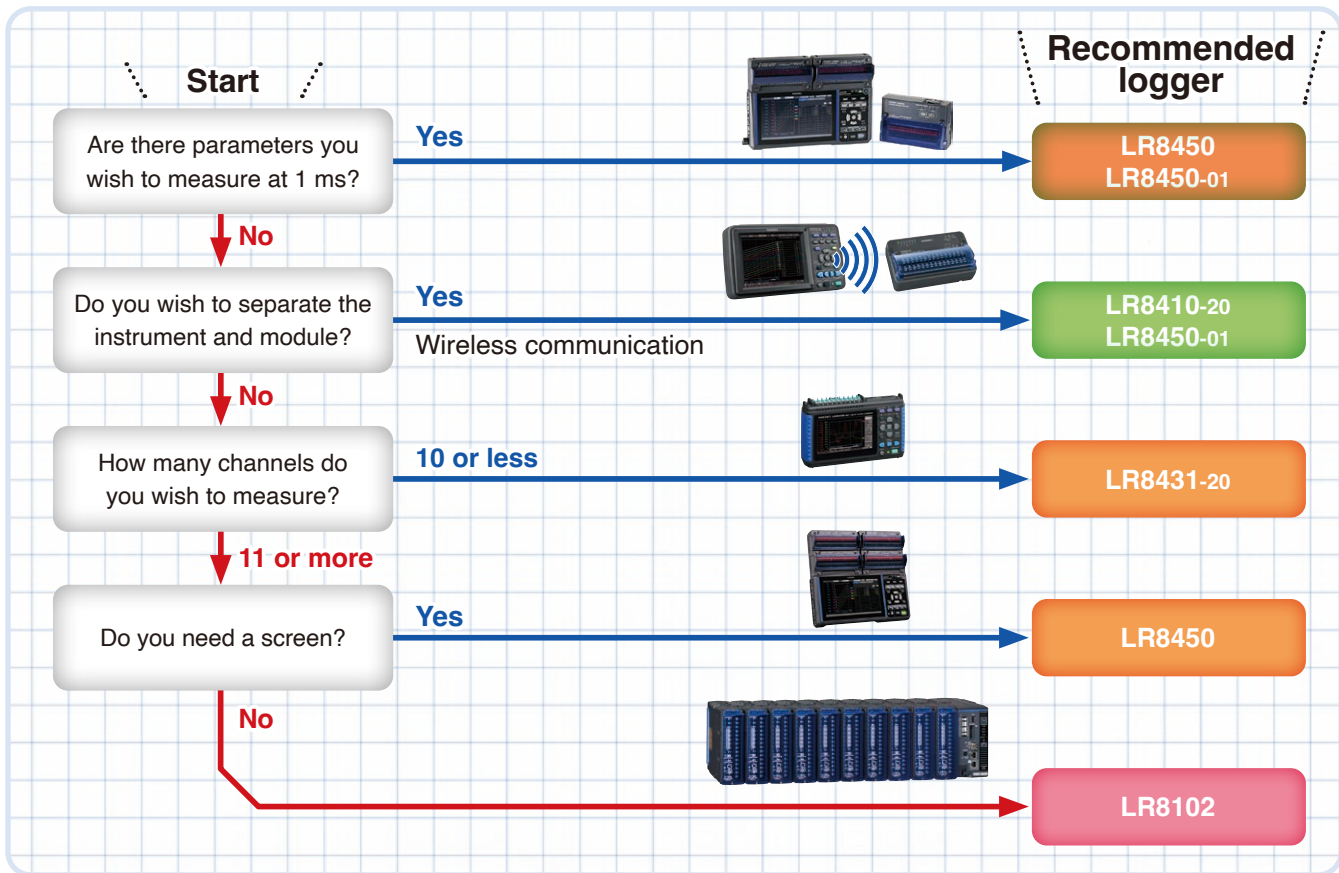
PC application with convenient analysis capabilities

Instrument and sensor combinations to meet various needs



# Extensive lineup of data loggers

## Selection guide

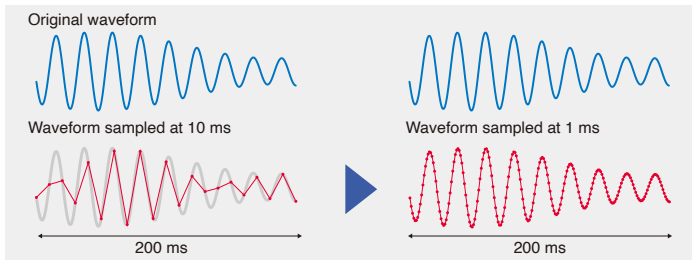


## Comparison

Model spec items	LR8450 standard	LR8450-01 standard/wireless LAN	LR8410-20 wireless Bluetooth® communication	LR8431-20 small and versatile	LR8102 for systems
Channel count	5 to 120	5 to 330	15 to 105	10	15 to 3000
Maximum sampling interval	1 ms	1 ms	100 ms	10 ms	5 ms
Wireless	-	Wireless LAN	Bluetooth® communication	-	-
Input	Voltage Current Thermocouple RTD Humidity Resistance Strain Pulse/logic CAN	Voltage Current Thermocouple RTD Humidity Resistance Strain Pulse/logic CAN	Voltage - Thermocouple RTD Humidity Resistance - Pulse/logic -	Voltage - Thermocouple - - - - Pulse -	Voltage Current, power Thermocouple - - - - Pulse/logic -
Module	U8550 to U8556	U8550 to U8556 LR8530 to LR8536	LR8510, LR8511 LR8512 to LR8515, LR8520	no module needed	M7100, M7102, M7103
Interface	LAN, USB	LAN, USB	LAN, USB	USB	LAN
External memory	USB drive SD memory card	USB drive SD memory card	USB drive SD memory card	USB drive CF card	USB drive SD memory card
Battery-powered	✓	✓	✓	✓	-

# Features

## Fully isolated channels & sampling in 1 ms LR8450/LR8450-01

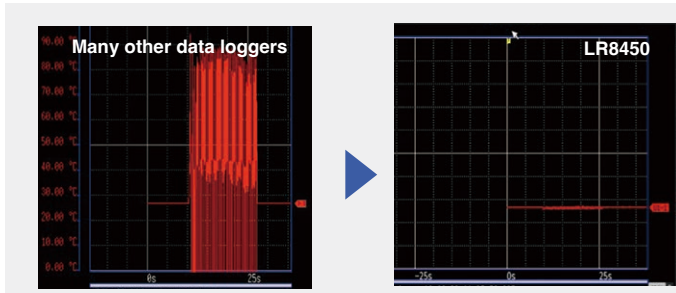


Observe high-speed waveforms, for example of vibrations, with sampling in as short as 1 ms.

For voltage measurement and temperature measurement using thermocouples, all models feature isolated input for all channels. This design lets you make connections without worrying about shorts, and allows you not to worry about interference or electric shock.

Users need measurement solutions that are capable of accommodating abrupt changes in load as well as chassis vibrations in the development of electric vehicles such as EVs, HVs, and PHVs. The LR8450 offers high-speed sampling in as short as 1 ms, allowing it to track waveforms that cannot be captured using 10 ms sampling.

## Noise resistance for solid reliability



Temperature measurement while an inverter is operating: the LR8450 is almost entirely free of the effects of noise.

The LR8450/LR8450-01 makes possible temperature measurement while limiting the effects of noise. In some cases, many loggers are unable to measure temperature normally in noisy environments due to the effects of high frequencies. Thanks to the newly revamped design of the LR8450, the effects of high-frequency noise have been significantly reduced, even for temperature measurement in the presence of operating equipment such as switching power supplies and inverters.

The LR8450 also features a moving average function. This capability enables real-time display of a moving average waveform of a different channel with the original waveform.

## Network connectivity for predictive maintenance

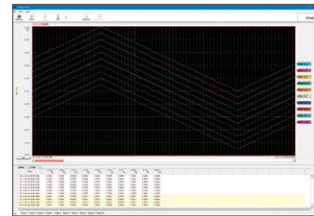
### Communication commands & LabVIEW® driver

Preventive maintenance requires replacing parts in manufacturing equipment regularly. This inevitably increases maintenance costs. You can reduce these costs by implementing predictive maintenance. By monitoring with data loggers, you can forecast when parts will need to be replaced. This enables you to replace only the minimum number of parts.

If you use communication commands and the instrument's LabVIEW® driver\*, you can capture data such as vibration and temperature for manufacturing equipment, send the data to an upstream server via LAN, and replace parts when you find increases in vibration or temperature.

\*LR8431 is not supported

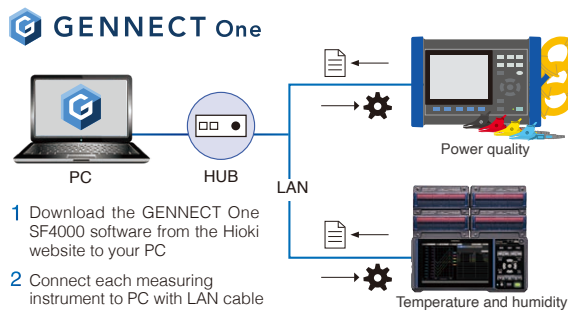
### Logger Utility : Included software



This software which can collect real-time data on a PC is included as standard. Up to five units can be controlled simultaneously via USB or LAN communication. Past data can also be checked during measurement.

(U8555 and LR8535 are not supported)

## Simultaneous measurement using multiple devices: GENNECT One



- 1 Download the GENNECT One SF4000 software from the Hioki website to your PC
- 2 Connect each measuring instrument to PC with LAN cable

Aggregate measurement data from not only loggers, but also waveform recorders, power meters, and other instruments onto a single PC. Display this measurement data on a single graph in real time. Summarize it in daily and monthly reports. Manage it in a centralized manner. GENNECT One is a Windows application that specializes in aggregating measurement data.

Data including CAN data from the U8555 and LR8535 can be viewed and measured in real time (logging function, dashboard function).

- Supported models
- LR8410-20
  - LR8450
  - LR8450-01
  - LR8102

GENNECT One is a free application. Access this 2D Code for details and downloads.



## Related products: compact, easy-to-install loggers

### WIRELESS MINI LOGGER LR8512 series



This compact logger can collect data wirelessly. You can configure settings and collect data from a smartphone, tablet, PC, or LR8410. The instrument can record a variety of parameters, including temperature, current, and pulse input, with the capability of collecting 500,000 data points per channel. (Not compatible with the LR8450-01)

### Compact Data Logger LR5000 series



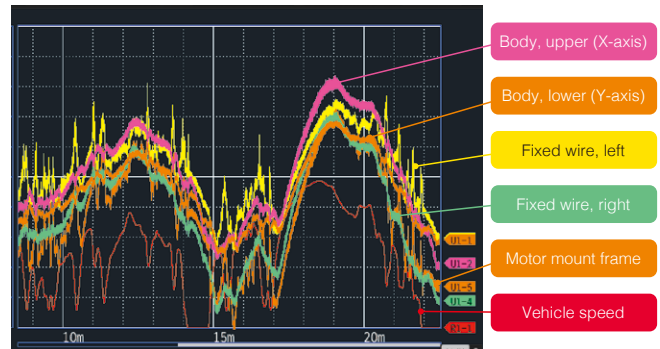
This compact data logger can record up to 50,000 data points per channel, making it ideal for capturing data over an extended period of time. The series includes models for measuring temperature, humidity, instrumentation signals, load current, pulses, and other parameters. The accessory Communications Adapter LR5091 is required in order to collect data.

# A new proposal from Hioki



## Fast sampling speed of 1 ms, even with wireless modules! Data Logger LR8450-01

This data logger can measure up to 330 channels when connected to four plug-in modules and seven wireless modules. It performs isolated high-speed voltage recording with its high-speed modules capable of sampling intervals as short as 1 ms.



Measurement with strain gages affixed to an automobile body (measured while driving)



### Wireless modules save wiring!

Wireless modules are ideal for multi-point measurement and measurement in remote locations. Using wireless modules lets you reduce the time and cost of connecting and routing large numbers of wires.



### Sampling in as short as 1 ms!

The instrument delivers 1 ms sampling despite its portable design. It can also record sensor output such as pressure and vibration.



### Strain modules with built-in bridge boxes!

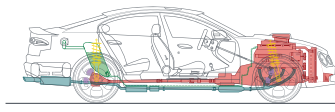
Simply connect gages to the strain module and you're ready to go. You can also use strain gage-type converters.

## Applications

### If you need to measure dynamic strain



Stress or load of moving parts



Brake or pipe strain

#### High-speed data logger + strain modules + strain gages

Strain modules have a built-in bridge box. This design lets you connect strain gages directly and measure vibration or pressure at up to 1 ms sampling.

MEMORY HiLOGGER LR8450 + STRAIN UNIT U8554

### If you need to measure current and voltage RMS values



#### Current probe (current) + differential probe (voltage) + data logger

Combine a current probe and a differential probe to measure either AC or DC current and voltage.

CURRENT SENSOR series CT7800, CT7700, CT7100, and CT7040  
DIFFERENTIAL PROBE P9000-02 (RMS output)

### If you need to measure power

Interfaces vary with the digits after the model-number's hyphen (e.g. 02 of PW3337-02)



PW3337

#### Power meter with D/A output paired with data logger

Measure power by combining the logger with a power meter that provides D/A output, for example the PW3337-02.

#### Power meters and their interfaces

PW3335-02, -04 (AC/DC single-phase 2-wire)  
PW3336-02, -03 (AC/DC single-phase 2-wire to three-phase 3-wire, 2ch)  
PW3337-02, -03 (AC/DC single-phase 2-wire to three-phase 4-wire, 3ch)

### If you need to measure resistance variations



RM3545A

#### Resistance meter and Battery HiTester + data logger

Measure resistance variation by combining the logger with a resistance meter that provides output functionality, for example the RM3545A. Simultaneously measure the temperature and resistance variations of parts or battery internal resistance, for example in a constant-temperature.

RESISTANCE METER RM3545A  
BATTERY HITESTER BT3562A

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